

EVAL6902D

L6902D 1A Constant current battery charger evaluation board

Data Brief

General description

The L6902D evaluation board integrates the stepdown switching regulator with adjustable current limit L6902D as well as the external components required for a typical application.

The input voltage of the application board can range from 8V up to 25V due to the rated voltage of the input capacitor and the schottky rectifier repetitive peak reverse voltage (both 25V).

The external resistor divider (R1 and R2) sets the output voltage of the application board to 3.3V.

A different output voltage can be regulated from 1.235V up to 10V, which is the rated voltage of the output capacitor.

A current limit of 1A is programmed by the $100 m\Omega$ sense resistor $R_{sense}.$

The inductor saturation current and the forward current of the schottky rectifier fit the current limit setting.

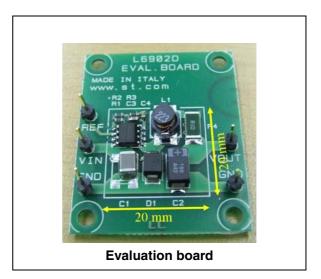


Figure 1. Application test circuit

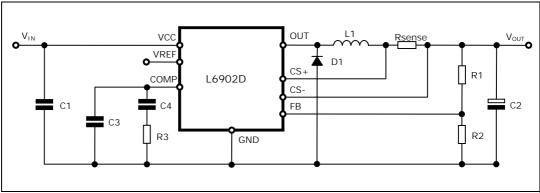


Figure 2. Package

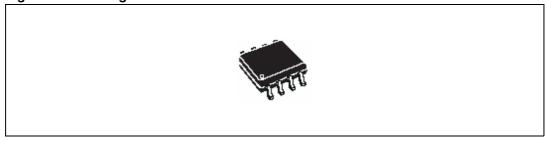


Table 1. Demoboard part list

Name	Value	P/N	Manufacturer	Notes
C1	10µF	C4532X5R1E106M	TDK	
C2	100µF	10TPB100M	POSCAP	
D1		STPS2L25U	ST	
L1	22μΗ	DO1813HC-223	COILCRAFT	
Device		L6902D	ST	
R1	8.2 kΩ			0603, 1%
R2	3.3 kΩ			0603, 1%
R3	4.7 kΩ			0603, 1%
C3	220pF			0603, 50V
C4	22nF			0603, 50V
R _{sense}	100mΩ			

2/4

EVAL6902D Revision history

1 Revision history

Table 2. Revision history

Date	Revision	Changes
17-Oct-2006	1	First issue

Please Read Carefully:

Information in this document is provided solely in connection with ST products. STMicroelectronics NV and its subsidiaries ("ST") reserve the right to make changes, corrections, modifications or improvements, to this document, and the products and services described herein at any time, without notice.

All ST products are sold pursuant to ST's terms and conditions of sale.

Purchasers are solely responsible for the choice, selection and use of the ST products and services described herein, and ST assumes no liability whatsoever relating to the choice, selection or use of the ST products and services described herein.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted under this document. If any part of this document refers to any third party products or services it shall not be deemed a license grant by ST for the use of such third party products or services, or any intellectual property contained therein or considered as a warranty covering the use in any manner whatsoever of such third party products or services or any intellectual property contained therein.

UNLESS OTHERWISE SET FORTH IN ST'S TERMS AND CONDITIONS OF SALE ST DISCLAIMS ANY EXPRESS OR IMPLIED WARRANTY WITH RESPECT TO THE USE AND/OR SALE OF ST PRODUCTS INCLUDING WITHOUT LIMITATION IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE (AND THEIR EQUIVALENTS UNDER THE LAWS OF ANY JURISDICTION), OR INFRINGEMENT OF ANY PATENT, COPYRIGHT OR OTHER INTELLECTUAL PROPERTY RIGHT.

UNLESS EXPRESSLY APPROVED IN WRITING BY AN AUTHORIZED ST REPRESENTATIVE, ST PRODUCTS ARE NOT RECOMMENDED, AUTHORIZED OR WARRANTED FOR USE IN MILITARY, AIR CRAFT, SPACE, LIFE SAVING, OR LIFE SUSTAINING APPLICATIONS, NOR IN PRODUCTS OR SYSTEMS WHERE FAILURE OR MALFUNCTION MAY RESULT IN PERSONAL INJURY, DEATH, OR SEVERE PROPERTY OR ENVIRONMENTAL DAMAGE. ST PRODUCTS WHICH ARE NOT SPECIFIED AS "AUTOMOTIVE GRADE" MAY ONLY BE USED IN AUTOMOTIVE APPLICATIONS AT USER'S OWN RISK.

Resale of ST products with provisions different from the statements and/or technical features set forth in this document shall immediately void any warranty granted by ST for the ST product or service described herein and shall not create or extend in any manner whatsoever, any liability of ST.

ST and the ST logo are trademarks or registered trademarks of ST in various countries.

Information in this document supersedes and replaces all information previously supplied.

The ST logo is a registered trademark of STMicroelectronics. All other names are the property of their respective owners.

© 2006 STMicroelectronics - All rights reserved

STMicroelectronics group of companies

Australia - Belgium - Brazil - Canada - China - Czech Republic - Finland - France - Germany - Hong Kong - India - Israel - Italy - Japan - Malaysia - Malta - Morocco - Singapore - Spain - Sweden - Switzerland - United Kingdom - United States of America

www.st.com

577